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(54) Title: METHOD FOR IDENTIFICATION OF ENZYMES

(57) Abstract: The present invention provides a method of identifying an enzyme, the method generally involving contacting a sample containing an enzyme with a selected enzyme substrate, where the contacting provides for covalent binding of the substrate to an amino acid of the enzyme to form a covalently modified enzyme; and determining the amino acid sequence of at least a portion of the covalently modified enzyme, using any available peptide sequencing technology, such as tandem mass spectrometry. The present invention further provides methods of identifying a nucleic acid encoding an enzyme, the methods generally involving identifying an enzyme; and, based on the amino acid sequence of at least a portion of the enzyme, designing nucleic acid probes or primers that hybridize to the nucleic acid encoding the enzyme.



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